

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization
International Bureau**



**(43) International Publication Date
19 May 2005 (19.05.2005)**

PCT

(10) International Publication Number
WO 2005/044923 A1

(51) International Patent Classification⁷: C09B 23/02,
C07D 209/24, 209/10, G01N 33/58, 33/533 // C12Q 1/68

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(21) International Application Number: PCT/GB2004/004573

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 29 October 2004 (29.10.2004)

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(30) Priority Data: 60/516,428 31 October 2003 (31.10.2003) US

Published:

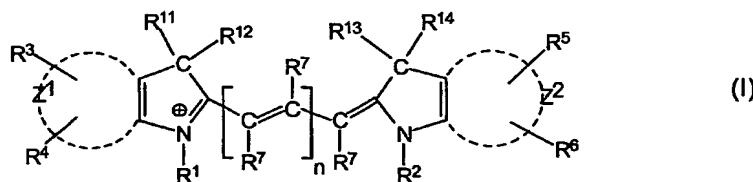
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(54) Title: CYANINE DYE LABELLING REAGENTS



(57) Abstract: Disclosed are cyanine dyes that are useful for labeling and detecting biological and other materials. The dyes are of formula (I) in which groups R³ and R⁴ are attached to the Z¹ ring structure and groups R⁵ and R⁶ are attached to the Z² ring structure, and n = 1, 2 or 3; Z¹ and Z² independently represent the carbon atoms necessary to complete a one ring, or two-fused ring aromatic system; at least one of groups R¹, R², R³, R⁴, R⁵, R⁶ and R⁷ is the group -E-F where E is a single bond or a spacer group and F is a target bonding group; one or more of groups R¹¹, R¹², R¹³ and R¹⁴ are independently selected from the group -(CH₂)_k-W, where W is sulphonic acid or phosphonic acid and k is an integer from 1 to 10. The dyes may be used in fluorescence labeling applications, where the presence of one and preferably multiple water solubilising groups attached to the 3-position of the indolinium ring reduces dye-dye interactions, and hence dye-dye quenching, particularly where multiple dye molecules are attached to components such as nucleic acids, oligonucleotides, proteins and antibodies.

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